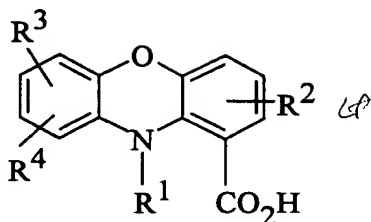


CLAIMS

What is claimed is:

5. CA 127:1907521. A compound of the Formula I



I

5 and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof,

wherein:

R¹ is hydrogen, lower alkyl, or cycloalkyl;

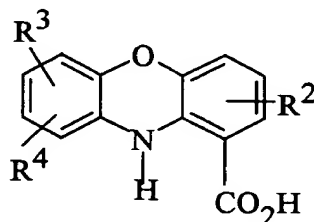
10 R² is hydrogen; lower alkyl, lower alkoxy, halogen, hydroxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl, arylalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxycarbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or dialkylamino;

15 R³ and R⁴ independently are hydrogen, lower alkoxy, aryl, heteroaryl, halogen, hydroxy, cyano, carboxy, alkoxycarbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, mono- or dialkylamino, or lower alkyl or lower alkenyl unsubstituted or substituted with one, two or three groups independently selected from oxo, halogen, hydroxy, carboxy, carbamoyl, amino, mono- or dialkylamino, or

20 aryl or heteroaryl optionally substituted independently with up to three groups selected from halogen, lower alkyl, lower alkoxy, hydroxy, carboxy, alkoxycarbonyl, cyano, nitro, trifluoromethyl, amino, mono- or dialkylamino, carbamoyl, carboxyalkyl, alkoxycarbonylalkyl, sulfamoyl, or
25 carbonylamino, or

R^3 and R^4 together form a carbocyclic group containing from five to seven members, up to two of which members are optionally heteroatoms selected from oxygen and nitrogen, where the carbocyclic group is optionally substituted with one or two groups selected from halogen, lower alkyl, lower alkoxy, mono- or dialkylamino, aryl, arylalkyl, or a heterocyclic group.

2. A compound of the Formula II



II

and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof,
wherein:

R^2 is hydrogen, lower alkyl, lower alkoxy, halogen, hydroxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl, arylalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxycarbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or dialkylamino;

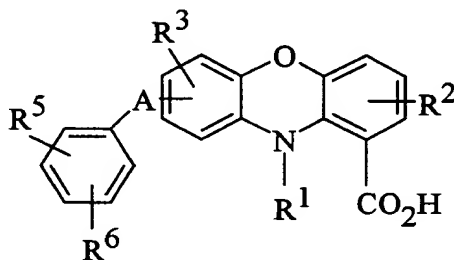
R^3 and R^4 independently are hydrogen, lower alkoxy, aryl, heteroaryl, halogen, hydroxy, cyano, carboxy, alkoxycarbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, mono- or dialkylamino, or lower alkyl or lower alkenyl unsubstituted or substituted with one, two or three groups independently selected from oxo, halogen, hydroxy, carboxy, carbamoyl, amino, mono- or dialkylamino, or

aryl or heteroaryl optionally substituted independently with up to three groups selected from halogen, lower alkyl, lower alkoxy, hydroxy, carboxy, alkoxycarbonyl, cyano, nitro, trifluoromethyl, amino, mono- or dialkylamino, carbamoyl,

carboxyalkyl, alkoxycarbonylalkyl, sulfamoyl, or
carbonylamino, or

5 R^3 and R^4 together form a carbocyclic group containing from five to
seven members, up to two of which members are optionally
heteroatoms selected from oxygen and nitrogen, where the
carbocyclic group is optionally substituted with one or two groups
selected from halogen, lower alkyl, lower alkoxy, mono- or
dialkylamino, aryl, arylalkyl, or a heterocyclic group.

3. A compound of the Formula III



and pharmaceutically acceptable salts, esters, amides, and prodrugs
thereof,
wherein:

A is absent, or is

15 lower alkyl or lower alkenyl unsubstituted or substituted with one
or two groups independently selected from oxo, halogen, hydroxy,
carboxy, carbamoyl, amino, mono- or dialkylamino;

R^1 is hydrogen or lower alkyl;

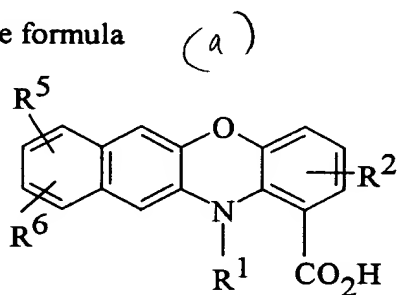
20 R^2 , R^5 , and R^6 are independently hydrogen, lower alkyl, lower alkoxy,
halogen, hydroxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl,
arylalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxycarbonyl,
carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or
dialkylamino; and

25 R^3 is hydrogen, lower alkoxy, aryl, heteroaryl, halogen, hydroxy, cyano,
carboxy, alkoxycarbonyl, carbamoyl, sulfamoyl, nitro,
trifluoromethyl, amino, mono- or dialkylamino, or

lower alkyl or lower alkenyl unsubstituted or substituted with one,
two or three groups independently selected from oxo,
halogen, hydroxy, carboxy, carbamoyl, amino, mono- or
dialkylamino, or

aryl or heteroaryl optionally substituted independently with up to
three groups selected from halogen, lower alkyl, lower
alkoxy, hydroxy, carboxy, alkoxycarbonyl, cyano, nitro,
trifluoromethyl, amino, mono- or dialkylamino, carbamoyl,
carboxyalkyl, alkoxycarbonylalkyl, sulfamoyl, or
carbonylamino.

4. A compound of the formula



and pharmaceutically acceptable salts, esters, amides, and prodrugs
thereof,

wherein:

R¹ is hydrogen or lower alkyl; and

R², R⁵, and R⁶ are independently hydrogen, lower alkyl, lower alkoxy,
halogen, hydroxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl,
arylalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxycarbonyl,
carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or
dialkylamino.

5. A compound according to Claim 1, which is selected from:

Phenoxazinecarboxylic acid;

3-Nitrophenoxazinecarboxylic acid;

3-(Phenylmethoxy)phenoxazinecarboxylic acid;

9-Chloro-8-(trifluoromethyl)benzo[b]phenoxazinecarboxylic acid;

Benzo[b]phenoxazinecarboxylic acid;

8,9-Dimethylbenzo[b]phenoxazinecarboxylic acid;
8,9-Dihydroxybenzo[b]phenoxazinecarboxylic acid;
8,9-Dichlorobenzo[b]phenoxazinecarboxylic acid;
7-Phenylphenoxazinecarboxylic acid;
5 7-(3,4-Dichlorophenyl)phenoxazinecarboxylic acid;
7-Benzylphenoxazinecarboxylic acid;
7-[(3,4-Dichlorophenyl)methyl]phenoxazinecarboxylic acid;
7-[2-(3,4-Dichlorophenyl)ethyl]phenoxazinecarboxylic acid;
8-(3,4-Dichlorophenyl)phenoxazinecarboxylic acid;
10 3-Nitrobenzo[b]phenoxazinecarboxylic acid;
3-Nitro-8-phenylphenoxazinecarboxylic acid;
7-[2-(3,4-Dichlorophenyl)ethyl]-3-nitrophenoxazinecarboxylic acid;
7-[3-(3,4-Dichlorophenyl)-3-oxoprop-1-enyl]-
3-nitrophenoxazinecarboxylic acid;
15 7-[3-(3,4-Dichlorophenyl)propyl]-3-nitrophenoxazine carboxylic acid;
7-[3-(3,4-Dichlorophenyl)-3-hydroxypropyl]-3-nitrophenoxazine
carboxylic acid; and
3-Amino-7-[3-(3,4-dichlorophenyl)propyl]phenoxazine carboxylic acid.

6. A method of treating Alzheimer's disease, the method comprising
20 administering to a patient having Alzheimer's disease a therapeutically
effective amount of a compound of Claim 1.
7. A method of inhibiting the aggregation of amyloid proteins to form
amyloid deposits, the method comprising administering to a patient in
need of inhibition of the aggregation of amyloid protein an amyloid
25 protein aggregation inhibiting amount of a compound of Claim 1.
8. A method of imaging amyloid deposits, the method comprising:
a. introducing into a patient a detectable quantity of a labeled
compound according to Claim 1;
b. allowing sufficient time for the labeled compound to become
30 associated with amyloid deposits; and

- c. detecting the labeled compound associated with the amyloid deposits.
9. The method of Claim 10 wherein the patient has or is suspected to have Alzheimer's disease.
- 5 10. The method of Claim 10 wherein the labeled compound is a radio labeled compound.
11. The method of Claim 10 wherein the labeled compound is detected using MRI.

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